

REMARKS

Claims 1-13 and 17-23 are pending. Claims 1-3, 12, 13, and 17-20 have been amended, claims 14-16 have been canceled, and new claims 21-23 have been added to recite additional features of the embodiments disclosed in the specification. In addition, the specification has been amended to correct typographical errors.

In the Office Action, claims 1-3 and 12 were rejected under 35 USC § 103(a) for being obvious in view of a Joseph-Sunada combination. This rejection is traversed for the following reasons.

Claim 1 has been amended to recite how information in the MAC and management tables is managed in accordance with one or more embodiments of the invention. As amended, claim 1 recites detecting failure of a host of the MAC address, updating the MAC table to nullify registration of the MAC address based on detection of said failure, and updating the management table to activate registration of the MAC address, said updating preventing redundant registration of the MAC address in the MAC and management tables.

Turning now to the cited references, the Joseph patent discloses checking if a MAC address of a received packet is in a MAC table, and then dropping the packet if the address cannot be found. (See Paragraph [65]). As acknowledged in the Office Action, Joseph does not teach or suggest the management table of claim 1. Accordingly, Joseph does not teach or suggest any of the table management features added by amendment to this claim.

The Sunada patent discloses a discard table of destination MAC addresses. When a packet is received, the table is checked to determine whether an address of the packet is in the discard table. If so, then the packet is discarded.

Thus, Joseph discloses discarding a packet when the packet address is not in a MAC table and Sunada discloses discarding a packet when the packet address is in a discard table. However, neither patent provides a teaching or suggestion to combine use of a MAC table with that of a discard table for purposes of controlling transmission of a received packet to a destination.

And, even if Joseph and Sunada were combined, they do not teach or suggest that information in the discard table is managed based on the registration status of addresses in the management table, i.e., Joseph or Sunada does not teach or suggest the cooperative relationship that exists between the MAC and management tables for purposes of controlling transmission of a received packet to a host.

More specifically, neither patent teaches or suggests detecting failure of a host of the MAC address and then “updating the MAC table to nullify registration of the MAC address based on detection of said failure” and “updating the management table to activate registration of the MAC address.” These updating steps are performed for “preventing redundant registration of the MAC address in the MAC and management tables,” which, in turn, prevents transmission errors and efficient switching management. These features are not taught or suggested by Joseph or Sunada.

Based on these differences, it is respectfully submitted that claim 1 is allowable over a Joseph-Sunada combination.

Dependent claim 3 recites the additional step of “broadcasting the packet to a network if the destination MAC address of the packet is not registered in either of the management table or the MAC table.” These features are not taught or suggested by the cited references. In Paragraph [65], the Joseph patent discloses broadcasting a packet if its address is not found in a MAC table. However, Joseph does not teach or suggest checking the status of registration of the address in a management table prior to broadcasting.

Sunada is also deficient in this respect in that it does not teach or suggest checking the status of an address of a received packet prior to broadcasting the packet. Absent a teaching or suggestion of these features, it is respectfully submitted that a Joseph-Sunada combination cannot render claim 3 obvious.

Claim 12 recites the additional steps of “managing registration of information in a MAC table and a management table of the switch, said managing including preventing the MAC table and management table from storing redundant registration information for each of a plurality of MAC addresses.” Claim 12 further recites “checking a registration status of the MAC address of the input packet in the MAC table and the management table” and “discarding the packet if the MAC address has a first registration status in the MAC table and a second registration status different from the first registration status in the management table because of inaccessibility of the host.” These features are not taught or suggested by the Joseph and Sunada patents, whether taken alone or in combination.

Claims 4-11 and 13-20 were rejected under 35 USC § 103(a) for being obvious in view of a Deng-Sunada combination. This rejection is traversed as follows.

The Deng patent discloses registering the address of a host in a MAC table. However, Deng does not teach or suggest determining if the host become inaccessible and then “transferring the MAC address of the host registered in the MAC table to a management table if the host becomes inaccessible.” The Sunada patent also fails to teach or suggest these features, since as indicated above Sunada only discloses discarding a packet if an address of the packet is in a discard table.

That is, Deng and Sunda do not individually or collectively teach or suggest transferring information from a MAC table to a management table under any circumstances, let alone as recited in claim 4 - “transferring the MAC address of the host registered in the MAC table to a management table if the host becomes inaccessible.” Based on these differences, it is respectfully submitted that claim 4 and its dependent claims are allowable.

Dependent claim 6 recites that the transferring step includes “removing the registered MAC address from the MAC table” and “registering the removed MAC address in the management table.” These features are not taught or suggested by the Deng and Sunada patents, whether taken alone or in combination.

Dependent claim 7 recites “transferring the MAC address registered in the management table to the MAC table if the host becomes accessible.” These features are not taught or suggested by the Deng and Sunada patents, whether taken alone or in combination.

Dependent claim 8 recites that the transferring step includes “removing the registered MAC address from the management table” and “registering the removed MAC address in the MAC table.” These features are not taught or suggested by the Deng and Sunada patents, whether taken alone or in combination.

Dependent claim 10 recites “transferring the MAC address of the host registered in the MAC table to the management table if the status of the host indicates the host is inaccessible.” These features are not taught or suggested by the Deng and Sunada patents, whether taken alone or in combination.

Dependent claim 11 recites “transferring the MAC address of the host registered in the management table to the MAC table if the status of the host indicates the host is accessible.” These features are not taught or suggested by the Deng and Sunada patents, whether taken alone or in combination.

Claim 13 recites “changing a registration status of the remote device to a first status in the first table if the monitored status of the remote device indicates that the remote device is inaccessible” and “changing a registration status of the remote device to a second status different from the first status in a second table if the status indicates the remote device is inaccessible, wherein the first table controls transmission of the packet to the remote device and the second table controls blocking transmission of the packet to the remote device.” The Deng and Sunada patents do not teach or suggest these features. Accordingly, it is submitted that claim 13 and its dependent claims are allowable over a Deng-Sunada combination.

Dependent claim 17 recites “changing the registration status of the remote device to the first status in the second table and changing the registration status of the remote device to the second status in to the first table if the status of the remote device indicates the remote device is accessible again.” These features are not taught or suggested by the Deng and Sunada patents, whether taken alone or in combination.

New claims 21-23 have been added to the application.

Claim 21 recites “detecting existence of an error in the network switch based on a status of registration of the MAC address in the MAC table and the management table.” (See, for example, Paragraph [36] of the specification for support). These features are not taught or suggested by the cited references, whether taken alone or in combination.

Claim 22 recites that “the first registration status indicates that the MAC address of the host is not registered in the MAC table.” These features are not taught or suggested by the cited references, whether taken alone or in combination.

Claim 23 recites “detecting existence of an error in the network switch based on the first registration status and the second registration status of the MAC address in the MAC table and management table respectively.” These features are not taught or suggested by the Deng and Sunada patents, whether taken alone or in combination.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and timely allowance of the application is respectfully requested.

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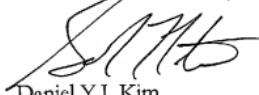
Amdt. dated August 29, 2007

Reply to Office Action of May 31, 2007

Docket No. HI-0153

To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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